System Configuration Team (SCT)
Reasonable & Prudent Measure #26
Meeting Notes
May 6, 1997

Greetings and Introductions.

The May 6 supplemental meeting of the System Configuration Team, to discuss the Columbia River Inter-Tribal Fish Commission's issue papers on proposed system improvements at Lower Granite, Bonneville and John Day Dams, was held at the National Marine Fisheries Service's offices in Portland, Oregon. The meeting was co-chaired by Jim Ruff of the Northwest Power Planning Council staff and Bill Hevlin of NMFS. The list of attendees for the May 6 meeting is attached as Enclosure A.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

Lower Granite 1998 Surface Collector Test.

The purpose of today's meeting, Hevlin began, is to review the science behind the tribal plan's responses to the three briefing summaries SCT has given to the Implementation Team recently, covering the 1998 surface collector test at Lower Granite, the multi-year plan at Bonneville Dam, and the installation of extended-length bar screens at John Day Dam. We've been asking CRITFC to develop its position papers on these three issues for some time now, he said; they have finally done so. Now we need to look at these tribal proposals with an open mind, to see whether or not the plans SCT has developed for these three projects need to be modified. We're not expecting to come to resolution on any of these issues today, however, added Ruff -- we just want to work through the technical aspects and supporting science, to be sure that everyone is comfortable with the accuracy of the information contained in the tribal issue papers before they're submitted to the IT.

It was agreed to go through the CRITFC issue papers project-by-project, beginning with Lower Granite Dam. Ron Boyce of ODFW pointed out that some of the issues central to today's discussion are not either/or propositions -- there are some areas of common ground as well. He suggested that identifyng those areas of commonality would be very useful for subsequent discussion; other SCT participants agreed.

We talked earlier about our desire to focus on the science and technical foundations of the CRITFC issue papers, said Hevlin. In the case of the Lower Granite surface collector test in 1998, however, the issue isn't so much a scientific one as a management/policy one. One of the first issues CRITFC brings up is what PATH said about the surface collector, and whether or not the 1998 test will produce any useful information for the 1999 decision, Hevlin said. To me, that falls more in the management/policy realm than the scientific one. That being the case, he continued, I don't see much point in SCT going around and around about Lower Granite -- I think this question is probably pretty ripe for the policy folks.

However, I think there is a threshhold technical question that needs to be answered, said Rod Woodin of WDFW -- do you or don't you believe that surface bypass technology, as it's being pursued, has the potential to get you to 80% FPE and 90% survival at the Snake River projects? I think there is consensus that what's been tested to date is unlikely to achieve those results, but that's why the modifications have been proposed for testing in 1998 -- we have one more opportunity to determine the applicability of that technology for the Snake River projects.

At the most recent meeting of the Anadromous Fish Managers, NMFS was asked to produce a justification paper explaining how the 1998 test at John Day will help us make the 1999 drawdown/transport decision, said Bob Heinith of CRITFC. Is that paper being prepared? I'm not aware that we're preparing a paper, Hevlin replied; the justification is in the Biological Opinion. At that meeting, said Chris Toole of NMFS, you cited PATH's September report; there are at least four levels in that report where surface collectors enter into the decision process. On some of them, we said it is unlikely that what we find out about surface collectors will affect particular decisions; on others, we said we just don't know, given the available information. The 1998 surface collector test at Lower Granite will affect the decision process for those areas where we said we don't know, Toole explained.

So it's still uncertain whether or not the 1998 test will be useful to the PATH process, said Heinith. I'm not saying that it won't be useful to PATH, replied Toole -- I'm saying we don't know what the outcome of that test will be. If it doesn't show a large increase in collection efficiency and/or survival, it won't be an important component in the decision pathway, he said. So we get back to the question of what criteria this prototype will have to achieve in order to be considered of use in the 1999 decision, said Heinith; previously, I think there was agreement that it needed to show similar results to those produced by the Wells system. Is that your understanding as well?

It depends where you are in the decision tree, Toole replied -- basically, its a hierarchical decision process. The first question we ask is, do transported fish survive at a high enough rate to meet the survival and recovery goal? If the answer is no, the next question is, can you increase survival through any of the other methods currently on the table? Surface collection is one of those potential methods, Toole explained. One of the key questions we don't know the answer to is, what effect does the surface collector have on delayed mortality? I would concede that we're unlikely to know much more about delayed mortality by next year.

The next question is, if the survival of transported fish is high enough to meet the recovery goal, can you collect enough fish? said Toole. That depends on collection efficiency, the survival of the transported fish, and the survival of in-river fish. You need to know those two survivals in order to know what proportion of fish you have to collect to meet the recovery goal; we don't know either of those right now. As we were doing the analysis, in the context of a reasonable range of "what ifs," to make a significant -- perhaps 10% -- increase in collection efficiency above what you would get with extended screens, you would need to have a surface collector that had an efficiency of 80% or above, said Toole.

So again, depending on where you are in the decision tree, the availability of an 80% efficient surface collector could potentially have key impact on your decision in 1999 about whether or not transportation can meet the survival and recovery goals, said Toole. If, as CBFWA is proposing, we want to move toward the drawdown alternative in 1999, the first thing that has to

be done is to eliminate the transport possibility. I would think, from a policy perspective, if you're going to ask for regional support to remove the Snake River Dams and make a radical change in the system, you want to be very certain that you absolutely cannot get there from here with the current system. In short, I believe you need the information the 1998 surface collection test at Lower Granite will provide, in order to complete the evaluation of transportation, Toole said.

The next question in the hierarchical analysis is, if you conclude that transportation does not meet the survival and recovery goals and, even if it did, you can't collect enough fish to meet the recovery goal even with a surface collector, then you move on to the question of whether those goals can be met through drawdown, Toole said. That's PATH Chapter 6, and the quotes the CRITFC position paper uses from Chapter 6 are accurate. However, said Toole, I'd like to put those into the context that we had two interim goals in that document -- 1) 50%-70% direct survival for in-river fish and 2) smolt-to-adult returns of 2%-6%.

As I explained at the most recent CBFWA meeting, said Toole, neither of those goals has been confirmed through life-cycle modeling as being equivalent to the NMFS jeopardy and survival/recovery goals. That's why I kept backing off when you asked me if I could tell you exactly what the collection rate has to be right now, Toole explained. PATH hasn't finished that analysis yet, and one of the things we don't know is whether or not that 2%-6% SAR is really correct.

One other point, he continued -- in your position paper, you said it would not be possible to meet the survival goals in-river without a drawdown, under any of the mechanisms PATH looked at. What we actually said was, we couldn't meet the full range of 50%-70% direct survival -- the best we could do, with the mechanisms we looked at, was 64%. In other words, we got well above 50%, but we couldn't quite get to 70%. That may or may not be adequate to meet the overall survival and recovery goals; at this point, we just don't know.

Returning to Heinith's earlier request that NMFS produce a justification paper explaining how the 1998 test at John Day will factor into the 1999 drawdown/transport decision, Toole said he would be willing to produce this document, essentially a written version of his comments in today's meeting. It might be even simpler for me to photocopy a page or two from the BiOp, said Hevlin -- it's pretty clearly stated in that document that we have mede a commitment to study surface collection, and to use that information as part of the Lower Snake decision process. It seems to me -- and this is what I'm telling my policy people -- that if we don't go ahead with the 1998 surface collection test, we really haven't given it our best shot.

Heinith expressed concerns about funding the 1998 surface collection study, given the limited funds availability under the MOA. The money to carry out the 1998 isn't large enough to derail something more important down the road, Hevlin replied; again, I think this test is necessary in order for us to be able to say we've thoroughly evaluated surface collection and what it can give us.

I would appreciate clarification from the PATH group that PATH is now looking at in-river methods, instead of transportation vs. drawdown, Heinith said. We looked at four different options in PATH Chapter 6, Toole replied. The first is reservoirs at current levels, with transportation; the second is reservoirs at current levels with zero transportation; the third is a

hybrid, and the fourth is reservoirs at some lower level, including natural river for the four Lower Snake projects, plus spillway crest at John Day. We're now in the process, in our prospective analysis, of looking at the nine alternative scenarios identified for us by the IT, Toole said. They cover those same basic options, plus some more specific configurational alternatives. All nine are being analyzed simultaneously, he added.

Just to give this discussion some sideboards, said Boyce, CBFWA has discussed four criteria under which we should be reviewing all SCT projects. The first is the question of how a given project fits into the critical path; the second is whether or not the project is needed to provide interim survival benefits; the third is, is the project needed regardless of the critical path decision? The fourth criteria is the MOA implications -- the financial implications of a project to BPA's direct program.

One question under criteria 1, said Boyce -- how would we extrapolate the results of the Lower Granite test to evaluate surface collection at other projects? Can these results be applied to other projects? The thinking is that Lower Granite, with its 60-foot intake submergence ceiling, is typical of the other Lower Snake dams, replied Steve Rainey of NMFS -- Lower Granite is representative of at least five of the eight dams.

COE's Dan Kenney added that the Corps is trying to take a less site-specific view of the work at Lower Granite -- what we're really after is information on fish behavior in relation to the hydraulics, he said. We're not trying to make this a Lower Granite surface collector; we're trying to prototype some of the principals involved in surface collection. If we can find out what those are, they should be transferrable to almost any project.

What the issue boils down to is, what additional information will we have to support the 1999 decision? said Ruff. If we go forward with this test, we will have more information on the efficiency of a surface bypass system. That system happens to be at Lower Granite Dam. If we abandon this project now, we won't have that data in 1999. We'll be asked how well surface bypass performs in comparison to existing systems and other in-river passage routes, and we won't know. To me, that's what this whole issue boils down to, and I think the 1998 test should go forward.

The tribes have never supported development of surface bypass at Lower Granite Dam, just as we've never supported the development of a raised tailrace at Ice Harbor Dam, said Heinith. The tribal position is that we need to remove the Lower Snake projects -- otherwise, it's all over for the fish.

It seems obvious to me that the rest of the region doesn't agree with that viewpoint, and would like to have more information available to debate the ultimate Lower Snake Feasibility decision in 1999, said Woodin. It sounds like the tribes are ready to make the 1999 decision today. That's correct -- the tribes have made the decision, and not just the CRITFC tribes, Heinith replied. If drawdown is the route chosen, but drawdown isn't fully implemented for 10 years, what do we do in the interim? asked COE's John Ferguson. The prudent path is to have a backup, and without the surface collection test, all we have as a backup is screens and spill. That's correct, said Heinith -- we're advocating maximum spill passage.

Are the tribes proposing that we re-allocate the $13.8 million proposed for the surface collector

test in 1998? asked Boyce. Yes, Heinith replied -- what we talked about at the last Executive Committee meeting was "piggybanking" that money -- putting it aside until the 1999 decision is made. Can the Corps do that, under the MOA? asked Ruff. It doesn't get charged to the fish cap until it has been spent, replied Witt Anderson of COE; technically we can carry it over, but we probably wouldn't do that. It's a policy decision, but most likely, those funds would be reprogrammed elsewhere in the Corps' Construction General account. In the end, it doesn't matter, because we're talking about dollars that are charged to ratepayers -- we wouldn't be spending them, so they wouldn't go into Bonneville's debt column.

That, to me, isn't the issue, Anderson continued -- the issue is, are we spending against the $582 million identified in the MOA for capital investment? Nobody knows the answer to that.

One other question, said Boyce -- are there any interim benefits this surface collector could provide in 1998 and 1999 that might help justify the investment? Depends on what your opinion of transportation is, Woodin replied -- because these fish would be passed over the spillway, we'll be detracting from transportation efficiency. So if we do, in fact, corral 80% of the fish, using the guidance curtain, and pass them over the spillway, this could reduce turbine mortality and forebay delay, said Boyce. In other words, under the most optimistic scenario, this test could provide better passage survival at Lower Granite.

In response to a question, COE's Lynn Reece said the life expectancy for the surface collector unit could be prolonged beyond the year 2000 through regular inspection and maintenance. So conceivably, said Hevlin, if the 1998 test provides positive results, this prototype could be used in the interim to improve FPE. If we get clean results, which is probably doubtful, said Boyce and Marv Yoshinaka of USFWS. In response to a question, Yoshinaka said that he supports doing the best possible test, from an information yield standpoint, that can be done over the short term.

Is there more that we can do, in terms of maximum data extraction from the 1998 test design? asked Hevlin. I doubt that we'll be able to answer every question about surface collection we can possibly think up in the course of the 1998 test, Kenney replied. I think we'll be able to answer the big one -- can we approach Wells-type efficiencies from the structure we envision? The bottom line is, I think we're going to have to be happy with what we get next year.

One comment we have made is that the monitoring effort in 1998 has to be significantly better than what occurred in 1996 and 1997, said Toole -- in particular, we'd like to see an increase in the number of radio-tagged fish, and in the monitoring of all routes of passage, as opposed to simply monitoring fish behavior in the immediate vicinity of the surface collector. And we are sensitive to those concerns -- they have been incorporated in our planning for 1998, Ferguson replied.

Kenney spent a few minutes going through the Corps' response to CRITFC's Lower Granite position paper (see Enclosure B for details). The bottom line is that we are planning to test the surface collector in both 1997 and 1998, to look at subyearling response to the structure; we do feel that we got somewhat better results than what the tribes stated in their position paper, but the point is, this is a prototype, covering only half of the powerhouse, and we do not expect, particularly in the spring, when spill levels are high, to collect the same percentage of fish we would see with a full-powerhouse design, Kenney said. We believe the 1998 configuration will

more closely duplicate the Wells surface collector performance, he added.

Increasing spill efficiency, of course, is one of the tribes' main goals, said Heinith -- do you have any plans to do spillway monitoring this year? Yes, Kenney replied -- we'll have single-beam hydroacoustic transducers on all of the Lower Granite spillbays this year, and will also have a number of antannae monitoring the spillbays for radio-tagged fish. So we'll have an idea of overall spill efficiency? asked Heinith. That's correct, Kenney replied.

So to be clear, are the tribes saying that they want to eliminate the surface bypass option from the Lower Snake Feasibility evaluation? asked Woodin. Yes, Heinith replied. Question, said Keith Kutchins of CBFWA -- is there now agreement that the information in the Lower Granite issue paper is technically accurate? We haven't had an opportiunity to review the Corps response yet, Boyce replied. That begs the question -- what information will this committee be providing to the IT on the Lower Granite surface collector? asked Ruff. To me, it sounds like it's the tribal position paper, plus the SCT's briefing summary. We also have technical comments from USGS (Enclosure C), which have already been provided to the IT members, as well as the Corps' response to the tribal issue paper (Enclosure B). At some point, said Ruff, the paper trail has to stop, and the issue needs to move up from SCT to IT.

Let's be sure that we highlight the most time-sensitive issue for IT consumption, and move on, said Boyce. Suggestion, said Hevlin -- we have these three papers; why don't we give everyone here a week to submit comments on any of these documents to Jim or I -- we'll include those comments in the final package submitted to IT. After some minutes of further discussion, it was agreed that Hevlin and Ruff would draft a brief summary of the policy point inherent in this issue -- ie, that CRITFC does not support further funding of the Lower Granite surface collection study, while the other SCT members do support this program. In the interim, any comments on the three issue papers surrounding this program are to be submitted to Ruff or Hevlin by May 13.

Bonneville Dam Multi-Year Plan.

It seems to me that the most important issue here is the scientific basis for assessing the impact of screens on juvenile migrants, said Hevlin. The second important point is whether or not the outfall and collection system improvements are the best use of a pretty significant monetary investment.

This may be an area where we can reach some common ground, said Ruff -- surface bypass development, increased spill efficiency, improving adult passage and forebay guidance. What this discussion really comes down to is whether or not to relocate the outfall, and possibly whether or not to make improvements to the downstream migrant bypass channels and the extended screens.

The group spent a few minutes going through the contracting dates associated with the various projects at Bonneville. The main issues of contention are, whether or not to test extended-length screens at Bonneville Powerhouse 1 and 2, and whether or not to proceed with the PH2 collection system, DSM and outfall, said Hevlin. Let's take the second one first, because that's the biggie, said Ferguson.

I thought that Bob's issue paper did a very good job of explaining the probelms we have at

Bonneville, said Hevlin. However, there are a lot of people who have been working on these problems who don't agree with the solutions CRITFC is proposing. The problem as I see it is that, if you don't have a way to improve collection of the fish that are going through the Bonneville powerhouses, the only alternative is to put those fish through a turbine unit or through an improved bypass system, said Boyce. Why aren't we concentrating on putting a majority of fish over the spillway? asked Heinith. First of all, I don't think we can possibly direct all of the fish through the spillway, said Boyce. Second, I don't think we have the gas abatement measures in place to divert the necessary percentage of flow through the spillway. Nor would you want to, from an adult passage standpoint, said Ferguson.

One point that may bear some fruit at the SCT level for IT's benefit, said Anderson -- what are we going to get, in terms of improved survival, for the investment in B2 outfall DSM improvement, and is there a lot of debate over the projected numbers? A 7% to 27% increase in bypass survival, and a 35% increase in total project survival, replied COE's Rock Peters. The real question is fish guidance efficiency, and that's a real guess at this point, replied NMFS' Gary Fredricks. The point is that we don't know definitively at this point, said Peters, but we don't see any negatives, from a fish survival standpoint, from this new outfall system -- based on the information we have in hand, it's the best thing going in terms of immediate bypass survival improvement. From our standpoint, a 9,000-foot flume is a risky proposition, and one that has not been tested before, said Heinith.

It's a new system that is designed to meet today's criteria, said Ferguson. Are there some risks and uncertainties associated with that new system? Yes. Do we think they're big? No. What you have to ask yourself is, are those risks any larger than those associated with the old system? The answer, every time we ask that question, is no -- they're not even close.

A lengthy debate ensued. Ultimately, Heinith reiterated the tribal position that, rather than spending the large sums of money involved in these Bonneville project DSM improvements, it would be preferable to concentrate funding on surface bypass and spill passage improvements. From my perspective, said Ferguson, if we can't spend the money to improve a known bypass problem, and get a modeled 89%-94% improvement in project survival, then we have a serious problem. If we can't decide to provide that level of fix for a known problem while we research where to go for other solutions during the five or more years it will take to implement the ultimate solution, then we're in trouble.

If we go ahead with the Bonneville FGE tests, and get some similar results, will that change your mind at all? asked Hevlin. I guess my question is, what sort of results would it take from a prototype screen test at Bonneville to convince NMFS that it should be looking in another direction? asked Heinith. Do such criteria exist? No, Fredricks replied. I'm not saying we've made up our mind; if we get lousy returns from the test, it would definitely raise questions.

We have significant adult passage problems at Bonneville, and we need some significant funds to begin to correct those problems, said Heinith. I don't see the Corps putting any money into those kinds of measures. You have to identify what those measures are before that process can even begin, said Rainey. What about increasing attraction flow through the fish ladder entrances? asked Heinith. We are aware that trash racks are a problem, but as far as entrance conditions, I'm not aware that the problem really exists at Bonneville, said Ferguson. And in terms of adult fallback, I think that, in hindsight, we should have jumped on that sooner and

harder, he added. It isn't just us -- nobody really rode us to correct that situation until now. It's apparent that we have a problem, and now we're taking a fresh look at that. All that being said, we think there are other alternatives available, short of spending $45 million to correct the problem, said Heinith.

The discussion turned to the common elements between the CRITFC and SCT Bonneville programs. We are studying gas abatement; we're proposing to add adult fallback if SCT funds that work in 1998; we're working on spill efficiency and adding a fish guidance curtain, said Ferguson. Where is the lion's share of the money going? asked Heinith -- to an issue that is not common, PH2 outfall relocation. The lion's share of the money is going to increase juvenile passage survival at Bonneville, the project that all juveniles ultimately have to pass, said Woodin -- I think that, too is a common goal.

Is it fair to say, then, that we can agree that the PH2 outfall relocation will give us a 5% improvement in project survival, from 89% to 94%, from this single measure? asked Hevlin. That may seem small, but it's a termendous bang for the buck, said Boyce -- you don't get that from any other single project improvement. I guess I don't understand why CRITFC would oppose that. It's $45 million, Heinith replied -- it's unproven, untested, and we think that money could be better spent elsewhere.

Ultimately, the SCT again agreed that Hevlin and Ruff would frame this issue, reflecting the divergent viewpoints of CRITFC and the rest of SCT, for IT consumption.

John Day Dam ESBS.

At John Day Dam, you can meet your passage efficiency goals simply by completing installation of the flip-lips, according to the Corps report, said Heinith. So you're saying install flip-lips and spill more to achieve 80% FPE? asked Ruff. Correct, Heinith replied.

Even if we continue to install flip-lips and spill more, I hear that the maximum we can spill and stay within the 120% TDG waiver downstream from John Day is 120 Kcfs, said Ruff -- once flows reach a certain level, we'll be putting fish through the powerhouse. What do you do in the spring, when flows are higher? he asked. You run more flow through the powerhouse, Rainey replied.

So what do the tribes suggest to improve flow through the powerhouse under those flow conditions? asked Ruff. According to the Corps report, you can meet 80% FPE in both spring and summer by adding flip-lips, Heinith replied.

It seems to me that John Day ESBS is a little easier, in that what we're talking about is a phased implementation, said Anderson. We've asked for $10.2 million in 1998. That will allow us to install screens on five units next year; we can operate and evaluate those screens in 1998 and, depending on the results we see, we can make another decision on another complement of screens to be installed for the 1999 season. We'll look at the performance of the flow deflectors, and maybe we'll wind up with a partial complement of the bar screens across the powerhouse, in combination with spill, and we can get good flows for adult passage for a reasonable cost. The other thing we haven't talked about is adult fallback at the powerhouse, which is pretty substantial at John Day currently, said Fredricks.

There is a proposal on the table to phase implementation of ESBS at John Day, to allow us to evaluate FGE before proceeding with full implementation, said Ruff. There is another issue which we haven't discussed, said Heinith -- the gold-plating of John Day. The argument here is for an interim benefit, Ruff replied -- the fact is that this proposal will allow us to evaluate biological effects before we commit to the funding necessary for full implementation.

Why can't we place this project in abeyance until the flip-lips are in place and we have a chance to evaluate spill efficiencies under the new configuration, before we go down the road to do screens? asked Heinith. Actually, in August 1997, we'll be evaluating the extent to which the engineers have incorporated the issues raised during previous reviews, said Ferguson. After we have satisfied ourselves that those improvments have been incorporated into the design, then we move forward to install the ESBS systems on five of John Day's 16 units in 1998. After 1998, we'll go forward with ESBS installation on additional units once the results are in from the 1998 testing. But we'll wait to install screens on additional units until we do the kind of testing that gets at the questions CRITFC is raising, Hevlin said.

Two additional concerns, said Heinith -- first, zebra mussels. It may seem like a far-fetched concern, but from my own experience seeing these on the East Coast, you can forget screens completely if these things find their way to the Columbia Basin. The other question is, what do these screens do to turbine efficiency? At previous meetings, the Corps has said they can't even index-test the units with extended-length screens in place because they cause such hydraulic fluctuations. Is it true that we can't be sure we're operating turbines within peak efficiencies with the screens in place?

As far as zebra mussels go, no one is sure if or when they will arrive in the Columbia system, said Ferguson. We assume that some day they will, via boat traffic, and when they do, Bob is right -- they could cause problems, not only for screens, but nav locks and turbine intakes as well. . Does it make sense to forego what we believe to be improvements because of the potential for zebra mussel problems? That's something the policy people will have to deal with.

In terms of the effects of extended-length screens on turbine efficiency, again, Bob's right -- that's something we're looking into, Ferguson continued. When you put extended-length screens on an orifice, it does render the tests engineers use to measure flow to perform incorrectly. We have modeled McNary and Lower Granite with extended-length screens in place; the question is, how do you relate the information that's coming out of the model to how the turbines need to be set up and run in the field. BPA has direct-funded us to look at that question at McNary, and that work is ongoing. We believe that there will be enough commonality so that we can expand the McNary information to other projects, Ferguson said. We're doing all we can with the information we have, and as we get more information, we'll plug that in as well.

I'd also like to discuss lamprey for a moment, because that's an issue Bob has raised in the past, he continued. A few years ago, the Corps was concerned about lamprey as well, and we asked NMFS to go back through their data sets and give us their views. Their conclusion, in general, was that they didn't think lamprey were a problem, Ferguson said. That doesn't mean there aren't occasional instances when lamprey are impinged. However, I do take issue with Bob's contention that there was a high rate of lamprey impingement at The Dalles in 1993. That was a test screen, with different porosity than what we have now; the debris sweep was turned off so that we could mount a video camera on the prototype, and it ran for seven days without a debris

sweep. We simply haven't seen major lamprey problems at other projects on the river. What the data show is that, for the most part, lamprey go below the screens, Ferguson said. Are some impinged? Yes. Is it a major problem with ESBS systems in general? That's not what the data tell me. Still, there are a lot of incidents that go unreported, said Heinith, particularly because lamprey haven't been considered a target species. Certainly that's something we can look at more closely, said Ferguson, but again, based on what I know, I wouldn't say lamprey impingement is a reason to stop John Day ESBS installation.

There is a lot of language in CRITFC's John Day issue paper about the impact of extended-length screens on lamprey, on fry and on subyearling migrants, said Hevlin. To what extent do you think we need to debate that in our briefing for IT? he asked. I don't think the lamprey issue is a big deal, Fredricks replied, but the fry issue should definitely be discussed -- I don't know that it's a problem, based on the fish we've seen at the dams, but the question is, what about the fry we don't see? That's one of the justifications for continuing the spill program, said Hevlin -- there's certainly a possibility that we're not guiding all of the fish out of the turbines. Those are all valid issues that need further discussion, said Ferguson, but again, I don't think they're show-stoppers. For the tribes, they are show-stoppers, Ruff pointed out.

In terms of Bill's question about what to say to the IT, said Woodin, I suggest that we take a look at the operational data from the McNary extended-length screens in 1996 -- that has to be pretty much a worst-case scenario, because of the debris and VBS problems that occurred there. What you're saying is that, if we were going to see negative biological impacts from extended-length screens, we would have seen them last year at McNary? said Hevlin. That's right, Woodin replied.

After some minutes of further discussion, it was once again agreed that Hevlin and Ruff would write up a briefing paper, summarizing today's discussion for IT consumption. We'll develop a section on the specific issues CRITFC is raising about the biological impacts of the John Day ESBS system, Hevlin added.

With that, the meeting was adjourned. Meeting notes prepared by Jeff Kuechle, BPA contractor.